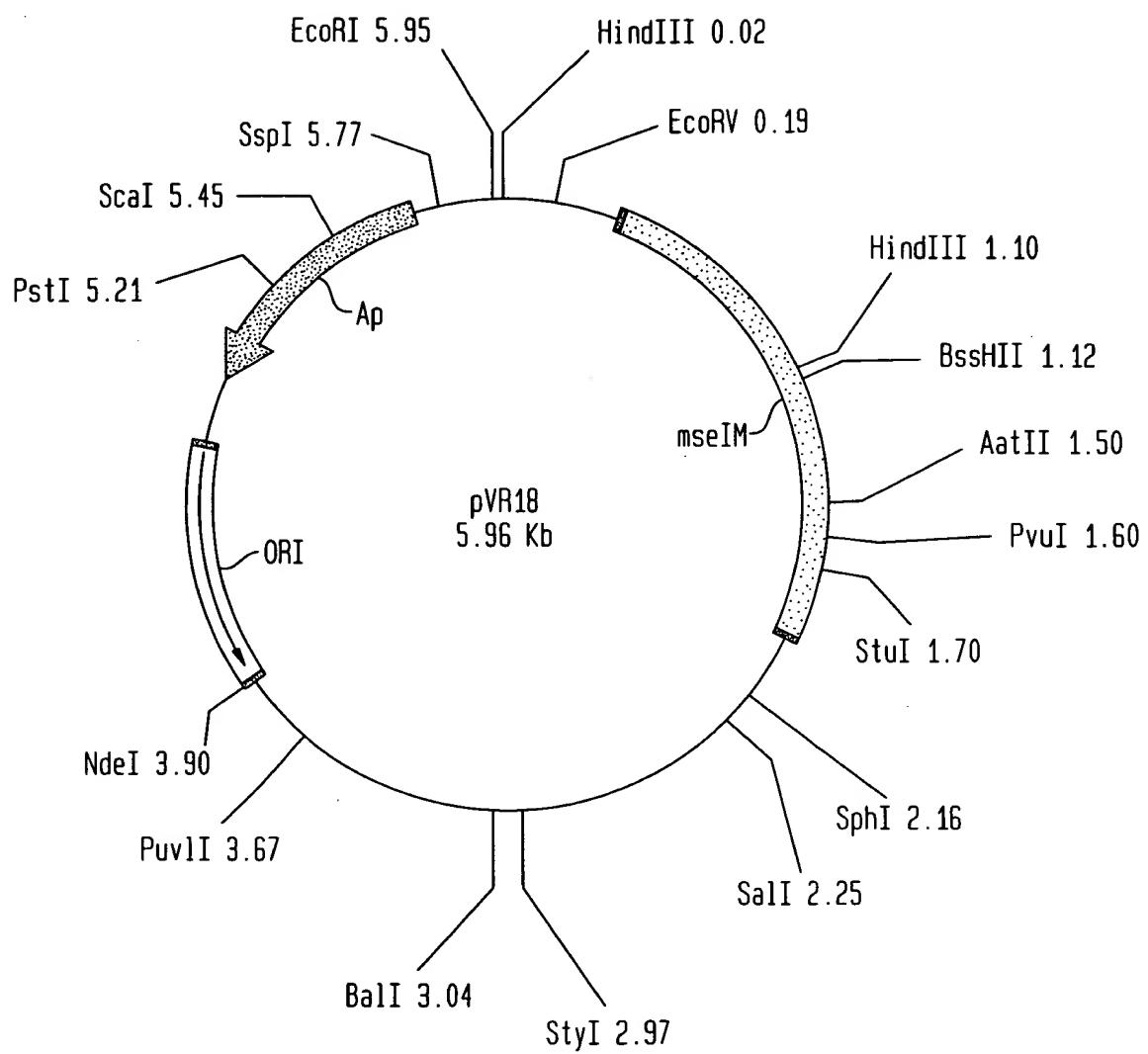




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FIG. 1





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FIG. 2A

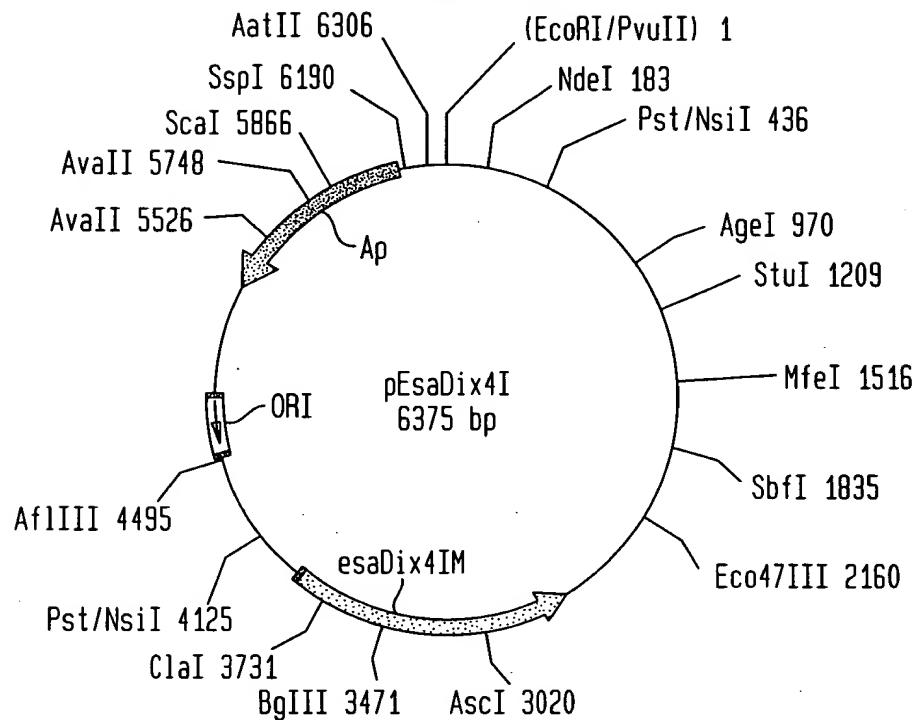
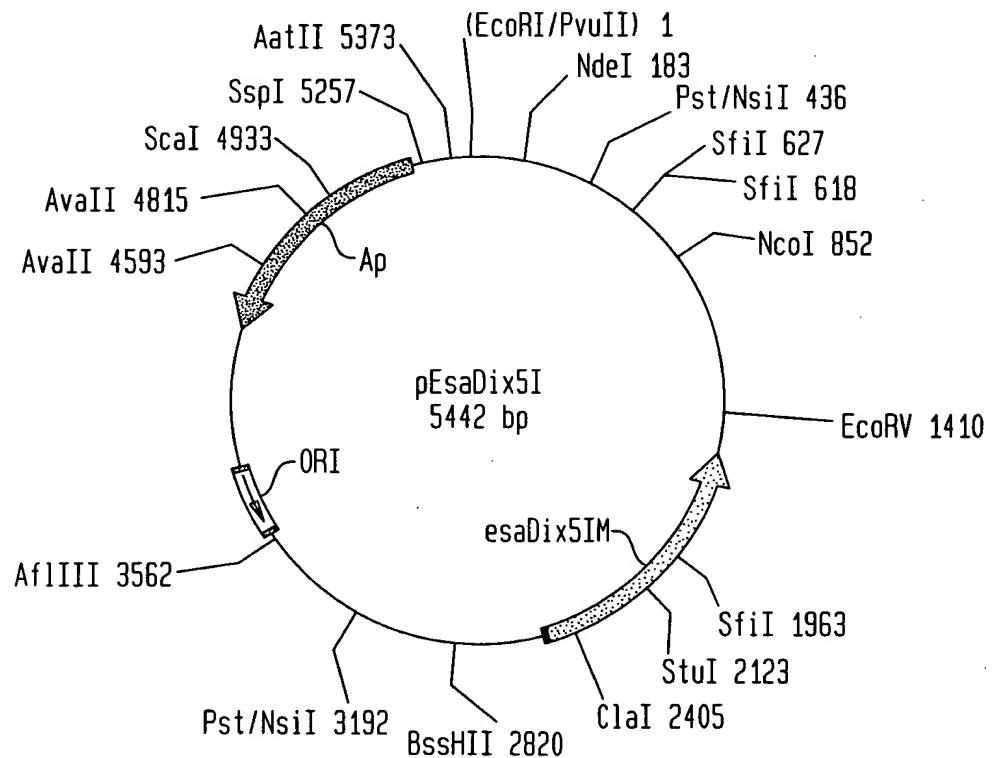


FIG. 3A





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FIG. 2B

1 2 3 4 5 6

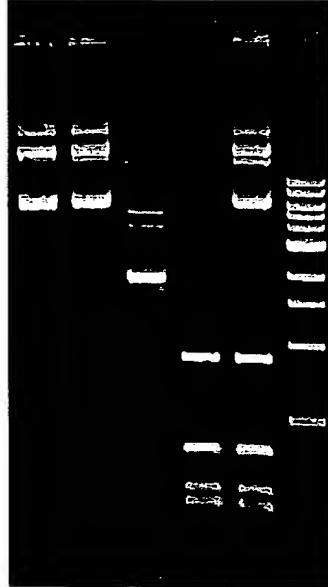
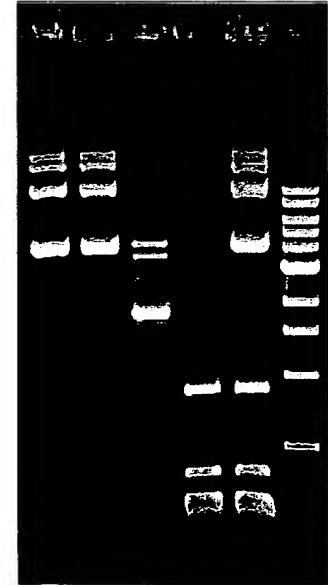


FIG. 3B

1 2 3 4 5 6





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FIG. 4

MleIM

1 ATGCCTATCTCGACCGTCTGGACGCCGGACGGAGACGACCTCATC	SEQ ID NO:1
M P I S T V W T P D G D D L I	SEQ ID NO:2
46 GTGGAGGCCGGACAACTCTGATTTCAATTCAAACGCTCCCCGACGCG	
V E A D N L D F I Q T L P D A	
91 AGCTTCCGAATGATCTACATCGATCCGCCGTTCAACACAGGGCGA	
S F R M I Y I D P P F N T G R	
136 ACGCAGCGGCTTCAGTCGCTCAAGACGACCCGCTCGGTACAGGG	
T Q R L Q S L K T T R S V T G	
181 TCGCGAGTCGGCTTCAAAGGCCAGACGTACGACACGGTCAAGAGC	
S R V G F K G Q T Y D T V K S	
226 ACTCTGCACTCGTATGACGACGCTTCACCGACTATTGGTCGTT	
T L H S Y D D A F T D Y W S F	
271 CTCGAACCGCGTCTCTGGAGGCTTGGCGGTTGCTCACCCCTGAC	
L E P R L L E A W R L L T P D	
316 GGCAGCGCTCATCTTCATCTGGATTACCGCGAGGTTCACTACGCC	
G A L Y L H L D Y R E V H Y A	
361 AAGGTCGTCCCTCGACCGATGTTGGACGCGAAAGCTTCTGAAC	
K V V L D A M F G R E S F L N	
406 GAGCTGATCTGGCGTACGACTACGGCGCGCGCTCGAAGAGCAAG	
E L I W A Y D Y G A R S K S K	
451 TGGCCCACCAAGCACGACAACATCCTCGTGTATGTGAAGGACCCG	
W P T K H D N I L V Y V K D P	
496 AACAACTACGTCTGGAACGGTCAGGATGTAGATCGCGAGCCCTAC	
N N Y V W N G Q D V D R E P Y	
541 ATGGCGCCGGGCTCGTTACACCCGAGAAGGTAGCGCTTGGCAAG	
M A P G L V T P E K V A L G K	
586 CTGCCCACCGACGTCTGGTGGCACACAATCGTCCGCGTGCAGC	
L P T D V W W H T I V P P A S	
631 AAAGAGCGCACCGGGTACCGACACAGAAGCCGGTCGGCATCATC	
K E R T G Y A T Q K P V G I I	
676 CGTCGCATGATTCAAGCGAGCAGCAATGAAGGCAGTGGTTCTG	
R R M I Q A S S N E G D W V L	
721 GATTTCTCGCTGGTAGTGGGACGACCGGGCGCCGCGGCCCCAG	
D F F A G S G T T G A A A R Q	
766 CTCGGACGCCGTTTGTGCTCGTAGACGTCAACCCAGAACGAAATC	
L G R R F V L V D V N P E A I	
811 GCGGTAATGGCAAAACGGTTGGATGACGGGGCATTGGACACCCAGC	
A V M A K R L D D G A L D T S	
856 GTGACGATCGTGCAGACTCCCCAGAGTGAACCAACGAACCCGACGGA	
V T I V Q T P O S D P R T D G	
901 TGA 903	



esaDix4IM

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FIG. 5

SEQ ID NO:3
SEQ ID NO:4

1 ATGCCTACACTGGATTGGCCCGGAAACAGTTAAGCTTCCCACCA
 M P T L D W P G K Q L S F P P
 46 GCTACCTCCTTGATCTGGAGAGTGTGGTCACTGAGGGAGCGGAG
 A T S L H L E S V V T E G A E
 91 TCACCCGCTAATCGTCTGATTTGGCGGACAACCTGCCGCTAATG
 S P P N R L I W A D N L P L M
 136 GTAGATTGTTGGCGAATATGAAGGGAAAATCGATCTGATCTAC
 V D L L A E Y E G K I D L I Y
 181 GCCGATCCCCCTTTTACGGATCGTACTTATGCGGCGCGAATT
 A D P P F F T D R T Y A A R I
 226 GGTATGGGAGGATTCGCGTGTCCACAAACCTGGCAGCTGCA
 G H G E D S R R P O T W O L A
 271 GAAGGATATAAGGACGAGTGGAGGATTAGATGAATACTGGAC
 E G Y T D E W K D L D E Y L D
 316 TTCCCTTATCCACGCCCTGGTACTGATGTATCGACTGCTGGCACCA
 F L Y P R L V L M Y R L L A P
 361 CACGGAAACGCTCACTTGACCTGGACTGGCACGCCAATGCCAC
 H G T L Y L H L D W H A N A Y
 406 GTACGTGACTGCTTGATGAGATCTCGGGCGACAGCGGTTCTC
 V R V L L D E I F G R Q R F L
 451 AACGAGATCGTCTGGATCTACGGCCCTCAGCCATCCGACGC
 N E I V W I Y H G P S A I R R
 496 GCCTTCAAGCGAAACATGATAACCATCTGGTTATGTGAAAGGT
 A F K R K H D T I L V Y V K G
 541 GAAAACATACATTCAATGCGGATGCGGTTCTGCAACCTTACCAT
 E N Y T F N A D A V R Q P Y H
 586 CCGAGCAACNCATAAGACCTTCGCTTCCTCCCCGAAGGCGGGCTT
 P S T H K T F A S S P K A G F
 631 GGTAAGGTGCGGAGTCGCAGCGCGCAAAGTGGCCGAAGACTGG
 G K V P D L Q R G K V P E D W
 676 TGGTATTTCCGGTCTGGCCGCTACACCGAGAACGGAGCGGC
 W Y F P V V A R L H R E R S G
 721 TATCCGACTCAAAAGCCTCAAGCCTTGCTGGAGCGGATCTGCTG
 Y P T Q K P Q A L L E R I L L
 766 GCCTCTCGAACGCAGGCGATCTGGTGGCAGACTCTCTGCGGC
 A S S N A G D L V A D F F C G
 811 TCAGGGACAACCGCTGTGGTGGCAGCCGCTGGGACGGCGCTTC
 S G T T A V V A A R L G R R F
 856 CTGGTCAACGATGCAAGCTGGCGCCGTTCTGTGACACGCACA
 L V N D A S W R A V H V T R T
 901 CGCTTGCTACCGAGGGAGTAAGTTCACTTTGAACGCCAGGA
 R L L R E G V S F T F E R Q E
 946 ACTTTACTCTACCTATCCAGCCACTTCCACCAAGATTGGTGTAC
 T F T L P I O P L P P D W L I
 991 ATGCCGAGGAGCAGATTGCCCTCAAGCACCCCTCTGAGAT
 I A E E Q I R L O A P F L V D
 1036 TTTGGGAAGTGGACGATCAATGGATGGCAAATCTCCGCGAC
 F W E V D D Q W D G K I F R S
 1081 CGTCATCAAGGCTTACGCTCCGCTTCAGGAGCAGGCGCCGCTC
 R H Q G L R S R L O E Q A P L
 1126 TCTCTACCATGACCGGGAAATGGACTGTTGTGTACGGTAGTG
 S L P L T G N G L L C V R V V
 1171 AGCCGTGAAGGGAAATCATGAGTTACAGGTGAGGCCATAGC
 S R E G E Y Y E F T G R A D S
 1216 CCTCACCCGATCGTTGA 1236
 P H P V S F *



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FIG. 6

1 ATGATCACGAACCTGATGGAAAACGATGTCAATTGGCAAAATCTAC SEQ ID NO:5
M I T N L M E N D V I G K I Y SEQ ID NO:6
46 TTTGCCGACAACATGGAAGTCCTGCGAGGGCTTCCGGCGCGTCC
F A D N M E V L R G L P A A S
91 GTGGACCTGATCTACATCGATCCTCCGTTAACACCCGGAAAGGTT
V D L I Y I D P P F N T G K V
136 CAGGAGCGCACTCAGCTAAAACGGTGCCTCCGAGTGGGGCGAT
Q E R T Q L K T V R S E W G D
181 CGCGTCGGATTCCAGGGCCGTCGCTACGAAAGCATCGTCGTGGGT
R V G F Q G R R Y E S I V V G
226 AAGAAGCGCTTACCGACTTCTTCGACGACTATCTGGCTTCCTG
K K R F T D F F D D Y L A F L
271 GAACCGCGCCTGGTGAAGCCCACATCGTGTCTGGCGCCGACGGG
E P R L V E A H R V L A P H G
316 TGCCCTACTTTCACGTCGACTACCGCGAGGTGCACTACTGTAAG
C L Y F H V D Y R E V H Y C K
361 GTCCTTCTTGACGGCATCTCGGTGCGAGGGCTTCTCAACGAG
V L L D G I F G R E A F L N E
406 ATCATCTGGGCCTACGATTACGGCGGGCGTCCGAAGGACAGGTGG
I I W A Y D Y G G R P K D R W
451 CCTCCTAAGCACGACAACATCCTGCTACGCCAAGACTCCGGT
P P K H D N I L L Y A K T P G
496 CGCCACGTGTTCAATGCGGACGAAATCGAGCGCATTCCCTACATG
R H V F N A D E I E R I P Y M
541 GCTCCGGGCCTGGTGGCCGGAAAGGCAGCCGTGGAAAAACTG
A P G L V G P E K A A R G K L
586 CCAACCGACACGTGGTGGCATAACGATCGTCCGACCAGCGGCTCC
P T D T W W H T I V P T S G S
631 GAGAAGACCGGGTATCCAACCCAGAAACCTTAGGGATTCTCCGC
E K T G Y P T O K P L G I L R
676 CGTATTGTGCAGGCATCGTCTCATCCGGGGCAGTCGTGCTGAC
R I V Q A S S H P G A V V L D
721 TTCTTCGCCGGCAGTGGGACAACAGGGTAGCGGCTTTGAGTTG
F F A G S G T T G V A A F E L
766 GGCCGGCGTTTCAATTCTGGTCGATAACCATCCGGAGGCCCTCCAG
G R R F I L V D N H P E A L Q
811 GTGATGGCCAGGCGCTTCGACGGCATCGAGGGGATCGAATGGGTG
V M A R R F D G I E G I E W V
856 GGCTTCGATCCGACACCGTACCAAGAAGGGCGAAAGCAGCGCCGC
G F D P T P Y Q K G A K Q R R
901 TCCTGCCCGGCCACCGGGTAA 924
S C P A P T G *



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FIG. 7

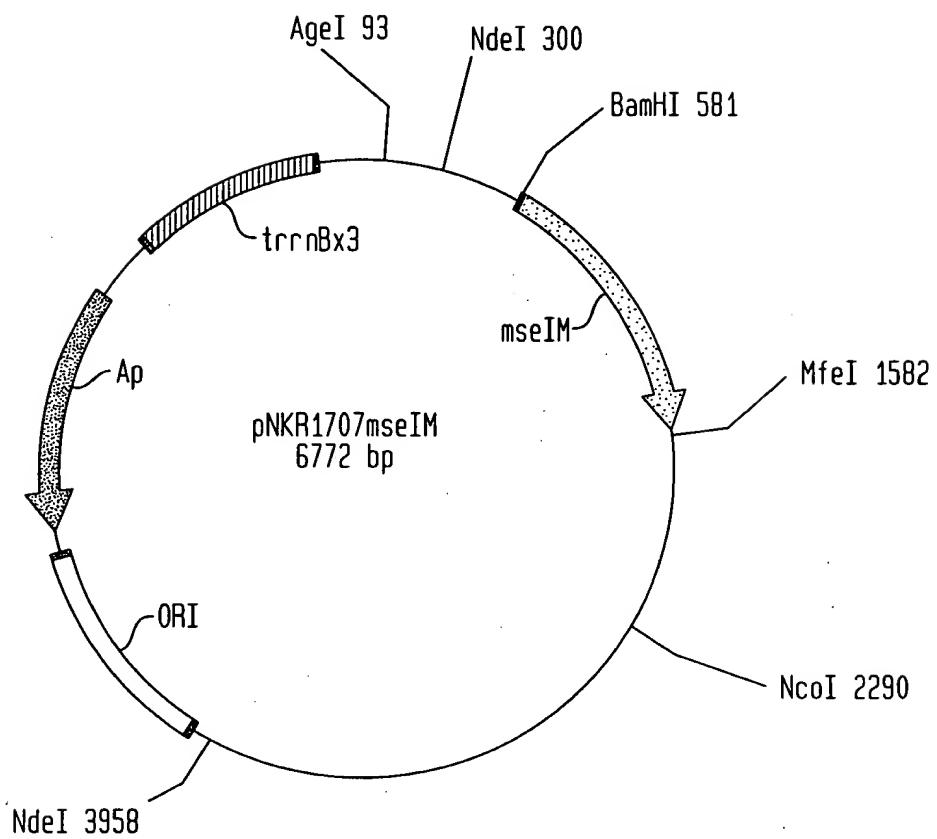
mseIR

1 GTGACCCACGAACCGACGGATGATCCGATTCTAGTGATGGCC SEQ ID NO:7
M T H E P T D D P D F I V M A SEQ ID NO:8
46 GCGAGCGCGCGAACCTCGCTGATCGGTACGTAGCGAGTGAAGAC
A S A A N L A D R Y V A S E D
91 GACCCCTGGGTCGGCAGCCGTTGAGTGGATCCTCGCGTTCCA
D P W V G S P F E W I L R V P
136 TCCAGAACGAAGGGCGCGGTGGTGAGCTGCTCGTGAGCGAATGG
S R T K G A V G E L L V S E W
181 GCTAATGCCAAAGGCCTCCGTGAAGAGGTGGGTCCAGCGAT
A N A K G L R V K R S G S S D
226 GCGGACCGCGTGTACACGGGCATCGCATCGAGATCAAGATGTCG
A D R V I N G H R I E I K M S
271 ACTTTGTGGAAGTCCGGCGGCTCAAGTTCAAGCAGATCCGGGAT
T L W K S G G F K F Q Q I R D
316 CAGGAGTACGACTTTGCCTCTGCCCTGGGATCAGCCCCTCGAA
Q E Y D F C L C L G I S P F E
361 GTGCACCGCGTGGCTGCTGCCAAAGACCTATTGCTTGAGTACGTG
V H A W L L P K D L L L E Y V
406 ATTGGTCACATGGGTCAAGCACACCGCGCAGCGGGAGCGACACT
I G H M G O H T G A S G S D T
451 GCGTGGCTGGGTTCCAGCGGACGAGCCGTATGACTGGATGCGC
A W L G F P A D E P Y D W M R
496 CCTTCGGAGGTGCGCTTAGGTACGTCGAAGATCTCCTCGCG
P F G G R L G H V E D L L A
541 GCCGGCCCCGGTCCCTACTGA 561
A G P G P Y



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FIG. 8





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FIG. 9A

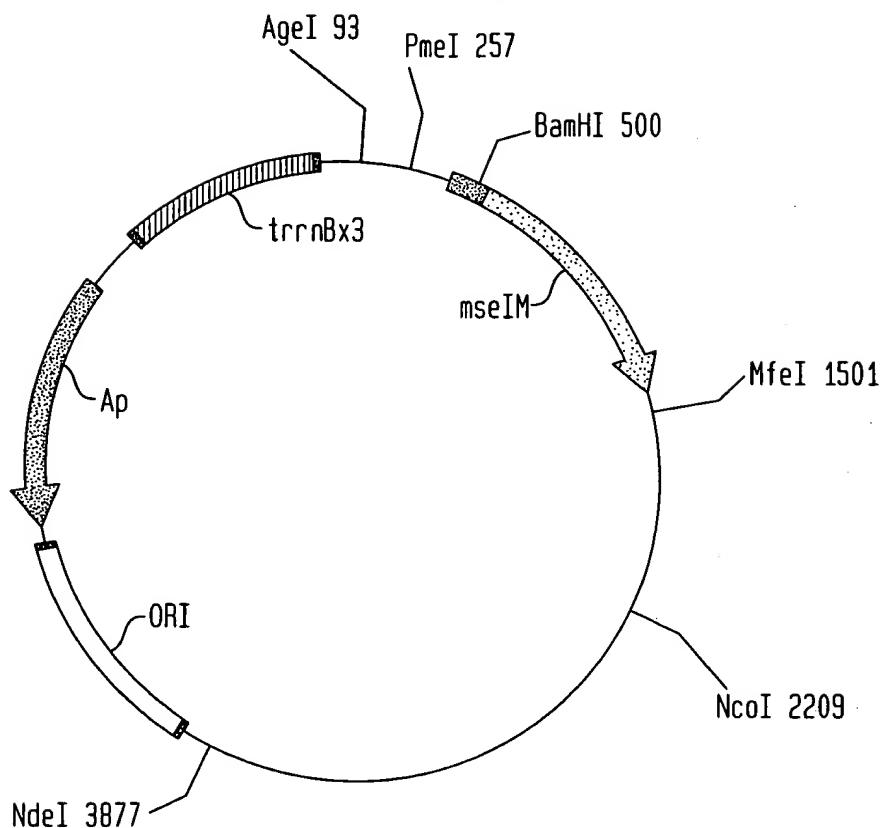


FIG. 9B

SEQ ID NO:9

AgeI

ACCGGTGATTGGACATTGCCGAAATCAGGCTGTCCTCACTATTGACGCACTGGCTG
GACTATCCACATCTACCTATTCCCCGAATAACGAGATCCCTCCAGCACCGGGCAA

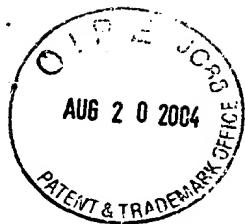
PmeI

TTGCCCGGTTTTTGC₋₃₅GTTGAATTGT₋₁₀CATTTGTGCCGTGGTGTAAACCGCAC

AGAATAAATTGTCGTGATTTCACCTTAAAATAAAATAAAAGAGAAAAAAATTCTCT
GTGGAAGGGCTATGTTAGATAAAATTGACCGTAAGCTGCTGGCCTACTGCAGCAGGA
TTGCACCCCTCTTTGCAGGGACTGGCTGAAGCCGTTAATCTGACAACCACCCCTGCTG
TGGAAAGCGCCTGAAACGGCTGGAGGACGACGGTATCCTTATCGGCAAAGTCGCCCTGC

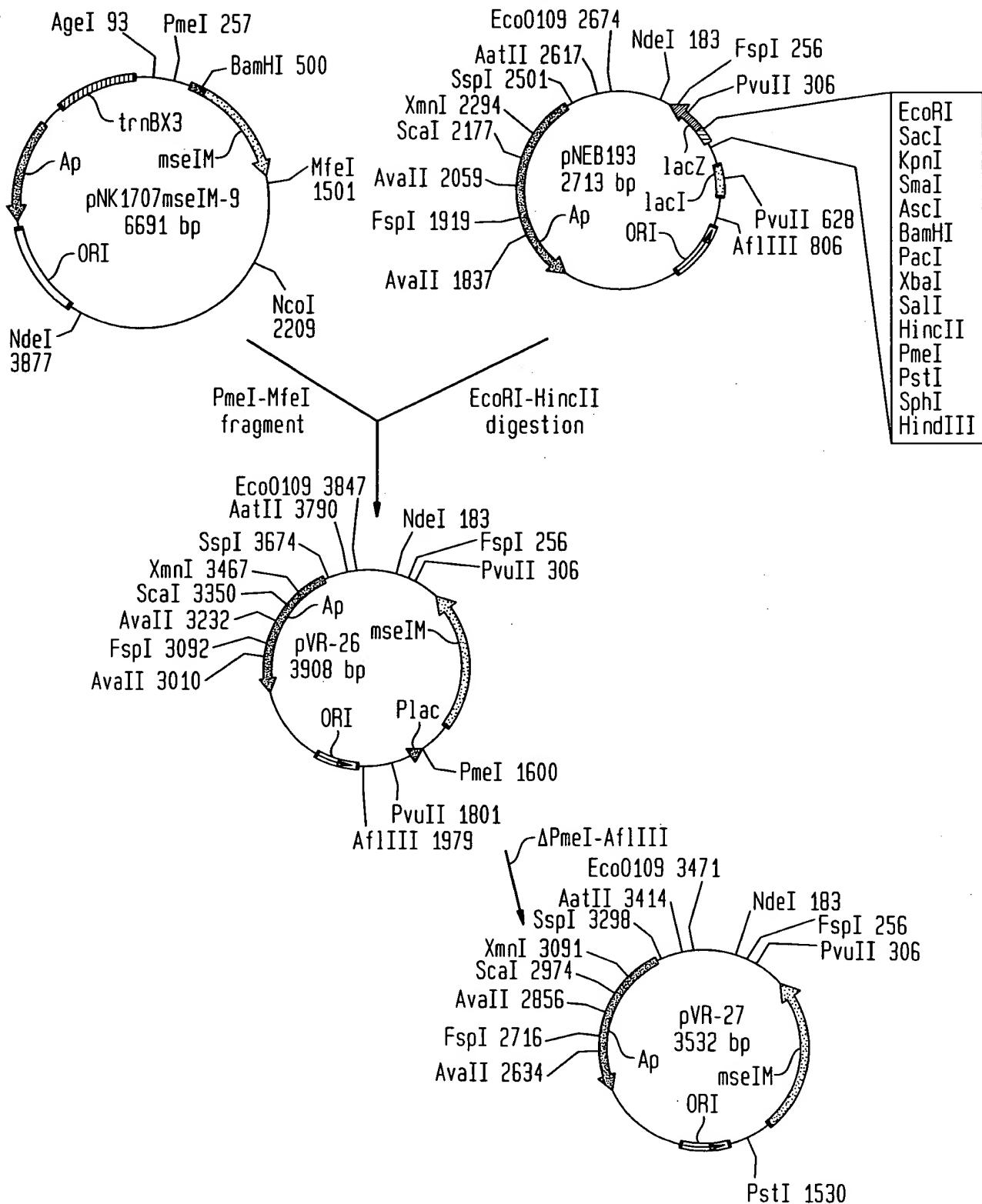
BamHI

TGGATCC



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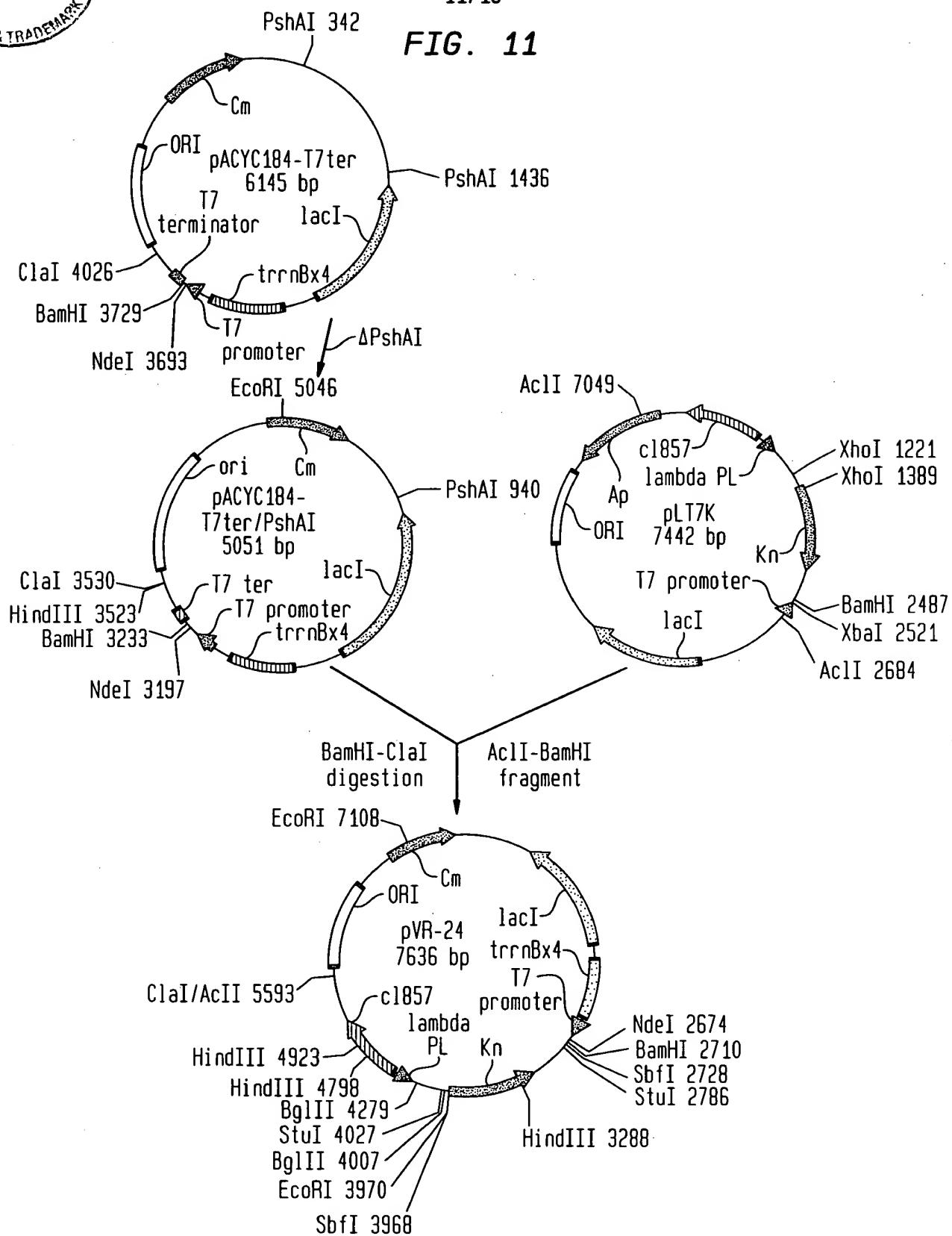
FIG. 10

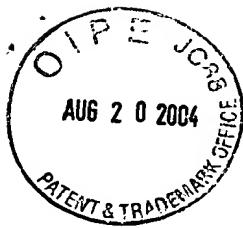




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FIG. 11





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FIG. 12A

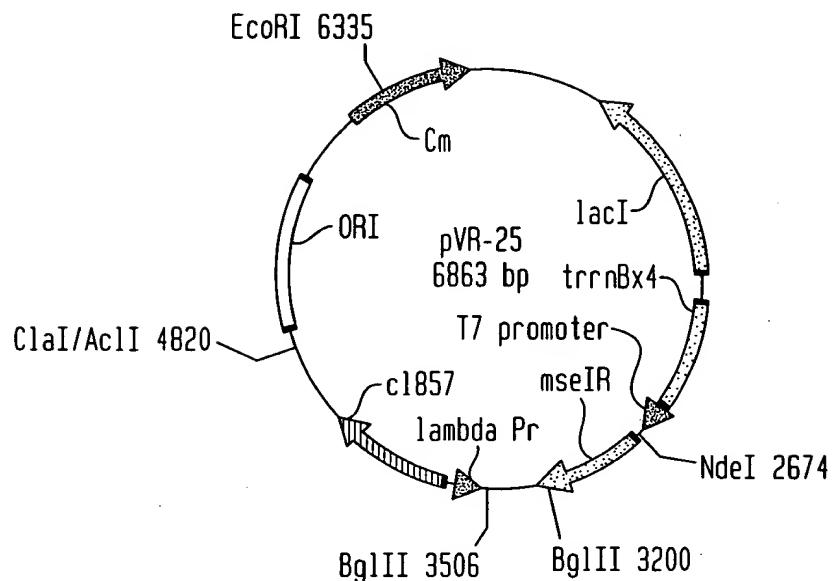
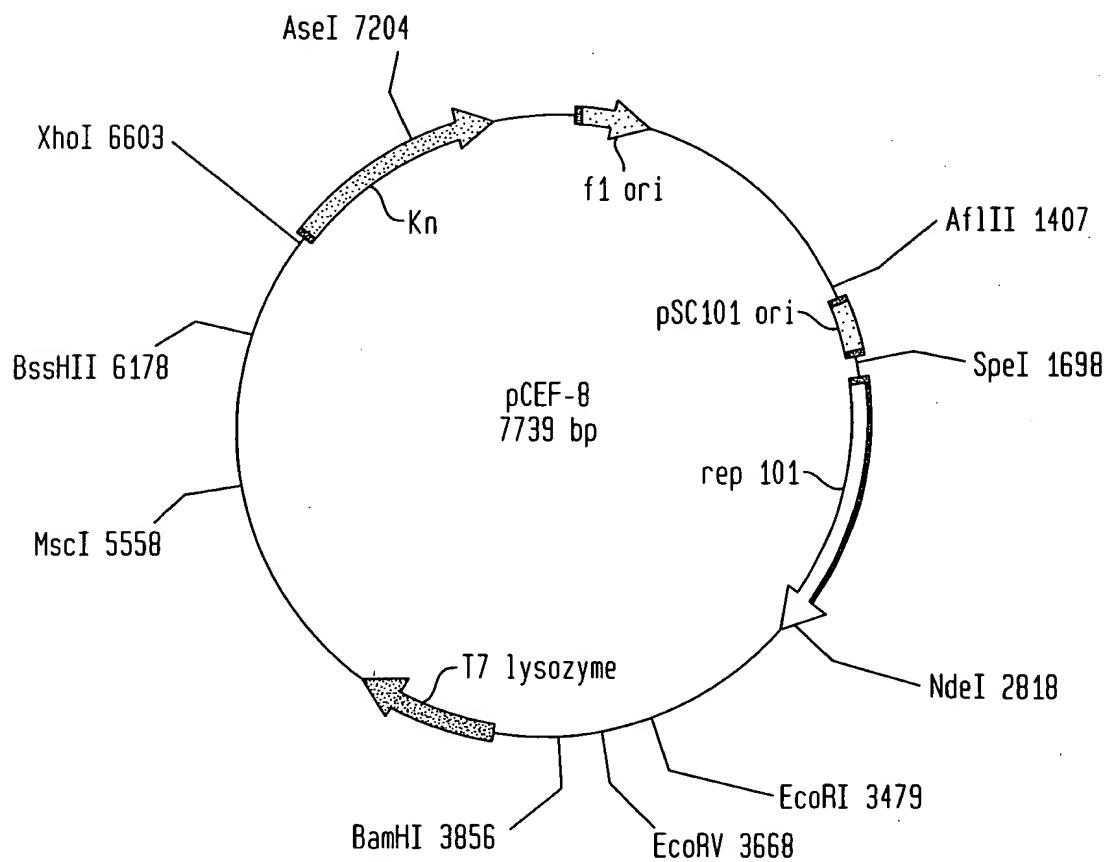


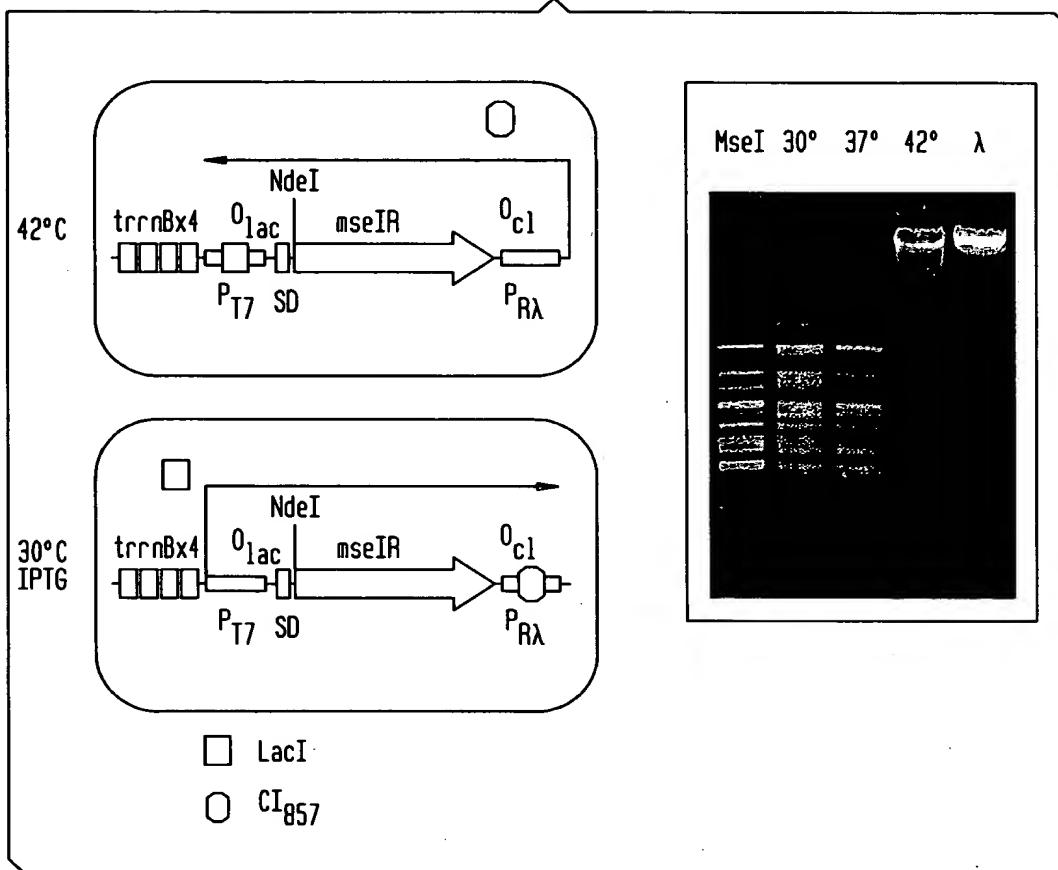
FIG. 13





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FIG. 12B

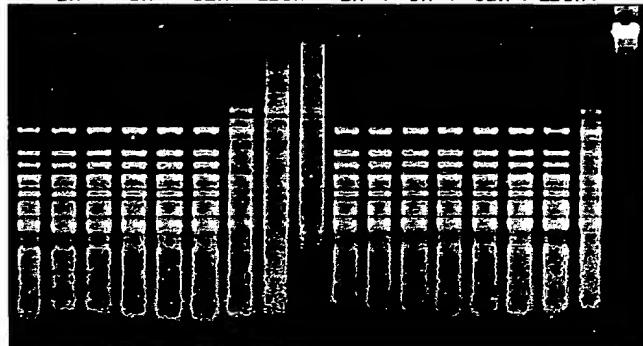




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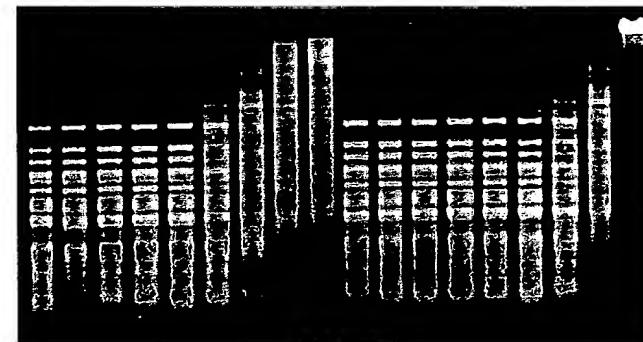
FIG. 14A

$\lambda + MseI$ 4x 16x 64x 256x 4x 16x 64x 256x
| 2x | 8x | 32x | 128x | 2x | 8x | 32x | 128x | λ



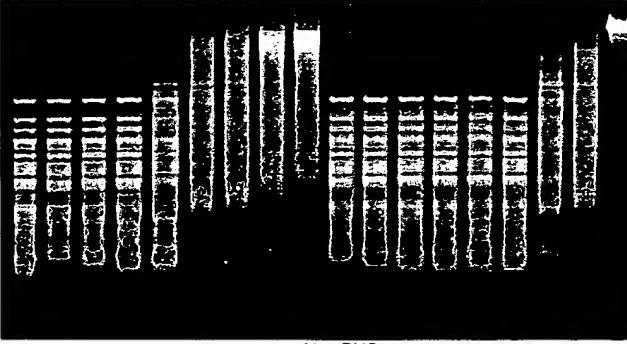
MseRM4

$\lambda + MseI$ 4x 16x 64x 256x 4x 16x 64x 256x
| 2x | 8x | 32x | 128x | 2x | 8x | 32x | 128x | λ



MseRM5

$\lambda + MseI$ 4x 16x 64x 256x 4x 16x 64x 256x
| 2x | 8x | 32x | 128x | 2x | 8x | 32x | 128x | λ



MseRM6

FIG. 15

